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ABSTRACT

The purpose of this study was to identify and describe barriers to the implementation of competency-based vocational education (CBVE) in Florida's secondary schools and to recommend strategies/solutions to overcome these barriers. Implications for policy formation and for administrative action were to be drawn. This project used as its basis the information gained in an earlier study of postsecondary barriers to CBVE. To gain an insightful view of present implementation strategies, major emphasis was placed on gathering data by observation and interview in secondary vocational programs in a range of implementation settings. Project staff visited CBVE sites, estimated degree of implementation through a program assessment instrument, and noted program instructional procedures and management techniques. Interviews were conducted with school personnel to ascertain responses to a list of tentative barriers statements and to obtain recommendations for solutions. A final list of 57 perceived barriers to CBVE implementation was identified and verified. The barriers statements were organized into an 11-category grouping of convenience: administration, teachers, support staff, students, physical resources, program operation, school procedures, school climate, teacher training, state education agencies, and research and evaluation base. (The program description instrument for occupational vocational education programs is appended.) (YLB)

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FINAL REPORT
Project No. DVACE 51C11
From September 1, 1984 to August 31, 1985

# IDENTIFICATION AND DESCRIPTION OF BARRIERS TO THE IMPLEMENTATION OF COMPETENCY-BASED VOCATIONAL EDUCATION IN SECONDARY SCHOOLS

College of Education
University of Central Florida
Orlando, Florida

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## ABSTRACT OF THE FINAL REPORT

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|---|---|
| Title of Project: | Identification and Description of Barriers to the Implementation of CBVE in Secondary Schools |
| Organization: | University of Central Florida |
| Project Director: | Glen E. Fardig |
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### The Problem

The division of Vocational, Adult, and Community Education (DVACE) has had a strong and long-term commitment to the establishment of competency-based vocational education (CBVE) in the State of Florida. In spite of DVACE commitment and support, progress toward implementing CBVE in secondary schools has been slow and incomplete. It is apparent that barriers to implementation do exist, and that they are strong and pervasive. Barriers to CBVE in postsecondary vocational education had been identified in a previous study (Sorg, et al, 1984), but the possible unique barriers to secondary CBVE had not been studied.

### Objectives

The purpose of this study was to identify and describe barriers to the implementation of CBVE in Florida's secondary schools, and to recommend strategies or solutions to overcome these barriers. Implications for policy formation and for administrative action were to be drawn.

### Procedures

This project used as its basis the information gained in the earlier study of postsecondary barriers to CBVE. In order to gain as insightful a view of present implementation strategies as possible major emphasis was placed on gathering data by observation and interview in secondary vocational programs in a range of implementation settings. Project staff visited nominated CBVE sites, estimated degree of implementation through a program assessment instrument, and noted program instructional procedures and management techniques. Interviews were conducted with school personnel to ascertain responses to a list of tentative barriers statements and to obtain recommendations for solutions.

## Results

A final list of 57 perceived barriers to the implementation of CBVE was identified and verified. The barriers statements were organized into an eleven-category grouping of convenience. Recommendations relating to barriers unique to secondary vocational education were reported. The statement of perceived barriers to secondary CBVE should prove useful in the development of plans for the implementation of CBVE statewide, and in anticipating difficulties to local school implementation of CBVE.

# INTRODUCTION

Competency-based vocational education (CBVE) remains a primary commitment among vocational educators in the State of Florida. The division of Vocational, Adult, and Community Education (DVACE) has supported the CBVE effort since 1978 with a significant amount of federal funds and a great many state-initiated activities. Vocational teachers have received training in the CBVE approach, reference documents have been produced, a demonstration site set up, and research projects have been funded.

Yet relatively few secondary vocational programs can be said to be fully competency-based, and almost no secondary schools have fully implemented CBVE throughout their programs. After almost ten years of effort and support by the DVACE, competency-based vocational education is widely resisted, or greeted with indifference. While basically the same situation applies to postsecondary vocational education, more progress has been made at that level. Clearly, there are some special negative forces at work in secondary vocational education preventing further implementation of CBVE.

There may be, for example, few benefits to secondary students, teachers, or schools in establishing CBVE programs. The resources required to organize the curriculum and produce materials may be beyond those of a majority of secondary schools. The very nature of vocational programs at the secondary level may not be conducive to the CBVE approach. Secondary school administrators may lack the information and skills needed to lead instructors in this direction. Recent legislation affecting secondary education may have additional effects, not yet clearly understood, on the CBVE adoption process. These and other broad issues were investigated to determine what impediments to CBVE still exist, and what might be done to formulate feasible solutions.

The recent study of barriers to the implementation of CBVE in postsecondary vocational education (Sorg, Fardig, and Lange; 1984) identified significant barriers at several levels. It was found that postsecondary administrators and faculty are not fully informed about CBVE, and are resistant to the changes necessary to implement it. Occupational task listings, along with appropriate instructional materials to teach them, and assessment instruments for final student performance, are not readily available. It was concluded that the Division of Vocational, Adult, and Community Education needs a strong, integrated, and centrally managed program to develop CBVE throughout the state.

The present study is based heavily on the study of postsecondary barriers to CBVE. Preliminary analysis indicated that most of the barriers at the postsecondary level also exist in secondary schools. It was also clear that there are some unique characteristics at both levels that tend to produce special barriers to CBVE. The overall purpose of the study reported here is to reaffirm generic barriers and identifiy specific barriers to CBVE in the secondary setting.

## Project Objectives

The request for proposals (RFP) issued by the Division of Vocational, Adult, and Community Education, Florida Department of Education, included the following objectives for the project:

1. Barriers to the implementation of CBVE in Florida's secondary schools will be identified and described, with emphasis on facility requirements, staff development, funding for curriculum, procedural changes, and role changes.

2. Strategies or solutions to overcome the barriers as reported in the literature and by successful CBVE program administrators will be identified and described.

3. Additional strategies or solutions to overcome the barriers identified will be suggested and described.

4. Implications for policy formulation and implementation at the administrative level will described.

5. A final report will be submitted to the Division of Vocational, Adult, and Community Education.

## Assumptions and Limitations

- It is a basic assumption of this study that competency-based vocational education has great potential for improving vocational instruction in Florida's secondary schools.

- It is assumed that the Division of Vocational, Adult, and Community Education continues its commitment of CBVE, and will mount specific efforts to eliminate barriers to its implementation.

- The present project limits its concern to secondary vocational education, and is limited to the Florida vocational setting. Barriers to CBVE, and their possible solutions, however, may be of more general concern, and applicable to a wide range of vocational levels and programs.

- It was not the intent of this study to uncover every conceivable barrier to CBVE, but only the most universal and serious ones.

## Definitions of CBVE and Related Concepts

Vocational educators in Florida are familiar with the term "competency-based vocational education," and use it readily in professional discussions. However, there is continuing confusion and misunderstanding about the nature of CBVE, even among secondary

vocational administrators and teachers who contend that they are operating competency-based training programs. It is now educationally fashionable to describe almost any program as competency-based, no matter how tenuous the connection to true CBVE principles and practices. This is not a healthy state of affairs for an instructional approach that has such potential for improving the teaching of vocational subjects.

Confusion and misinformation have generated unfortunate results. Vocational educators have shown unnecessary resistance to CBVE and have thought it impossible to implement in their programs. In order to clarify the principles of CBVE and related concepts, a set of definitions is presented here. These may lead to wider discussion and ultimately to more general understanding. They are as applicable to secondary as to postsecondary vocational education.

## Competency-Based Vocational Education

Competency-based vocational education (CBVE) focuses on the occupational skills ("competencies") trainees are expected to achieve, and the performance of those competencies. Briefly, the foundation of CBVE is built on two unalterable essentials:

1. the occupational competencies to be achieved by students are derived from a rigorous analysis of the occupation to ensure that they are accurate, complete, and up to date,

2. Students are assessed on the competencies by observing their performance in conditions similar to that of the occupation; occupational criteria and standards of performance are used to determine their proficiency.

Competencies are those observable skills incumbent workers use on the job -- the things they actually get paid to do. Knowledge and attitudes are considered to be integral to the occupational competencies to which they are related, not separate entities, and are so taught and learned. Progress through the training program is based on mastery of each competency, not on time enrolled or effort expended.

CBVE is less concerned with how the competencies are to be learned. It is possible to use many methods of teaching: large group instruction, small group instruction, independent study, projects, textbooks, etc. However, because mastery of the competencies is required, and because individuals learn at different rates, CBVE programs tend to move logically toward some forms of self pacing and individualization. Note, however, that these approaches are facilitating, not essential, elements of CBVE.

## Individualized Instruction

Individualized instruction, unlike CBVE, places its emphasis on the

method of instruction, not on content, assessment procedures, or standards of performance. It can be defined as instructional activity designed to accommodate individual human differences in background, skill level, aptitudes, interests, and learning styles. It is characterized by:

1. choice of instructional mode and media,

2. adjustment of instruction to learner characteristics and levels of skills,

3. flexibility in the allocation of student time to promote individual learning.

Individualized instruction can be applied to any domain; cognitive, affective, and psychomotor. It can be used to teach traditional topics, concepts, or competencies. In short, it provides a variety of routes to reach a predetermined goal.

Individualized instruction makes it possible for most learners to achieve mastery of the desired instructional content. Because of this, it is often (but not always) allied to competency-based vocational education to create a potentially powerful, though demanding, approach to occupational training. A close examination of Florida secondary vocational education programs in action reveals that there is very little individualization of instruction taking place. More often, some form of self-paced instruction is combined with CBVE.

## Self-Paced Instruction

Self-paced instruction is concerned only with the amount of time that is provided for each student to learn. The term does not describe the content of the program or the method of instruction employed. In a self-paced program of training the learner is allowed to work at his/her own best rate to achieve the specified knowledge or skill. There is no penalty for learning more slowly or faster than others. This is in contrast to familiar group-paced and time-based instruction (often called "lock-step") in which the entire class is taught as a group, instruction progresses from one topic to the next according to the group's requirements and the teacher's planned schedule, and it is expected that students will reach varying degrees of achievement (from failure to success).

In practice, self-paced programs do not provide unlimited time to learn; the student is expected to make continuing progress and to learn at a rate commensurate with occupational expectations. Most self-paced programs rely heavily on modularized instructional materials (like learning guides) or computer programs to deliver and structure routine instruction.

## Open-Entry/Open-Exit

Open-entry/open exit enrollment is an administrative device designed to make competency-based, self-paced, and individualized instruction more feasible and useful. It simply allows the trainee to:

1. enter the vocational program at virtually any time an appropriate work station is available,

2. exit the program without penalty whenever the specified competencies have been achieved, or when an alternative career decision has been made.

Because of their student custodial function, most secondary schools can not use this device at all. Some programs allow early completers to work on advanced skills or work other vocational areas.

## A Working Definition of Competency-Based Vocational Education

It has become increasingly apparent that any study of competency-based vocational education must have a comprehensive working definition of this approach in order to communicate clearly and facilitate the work. The present project has adopted the definition developed earlier, and has tested it in the secondary setting.

Unlike other descriptions of CBVE, this working definition presents just two essential elements; rigorous competency identification, and performance assessment of each competency. These are considered unarguable and unalterable. With these two essential elements in place, a vocational program can indeed be considered competency-based. Without them, CBVE cannot be said to exist, no matter how well organized the management system or how systematic the instruction. Unfortunately, many existing secondary vocational programs labeled as competency-based are weak in this the very foundation of CBVE.

The other category of characteristics or elements of CBVE we have chosen to call "facilitating." Vocational programs can be adjudged as being competency-based even though not all of the facilitating characteristics are discernable. These elements do allow the CBVE program to function smoothly, meet student learning needs more fully, and in short reach the full potential of the competency-based approach. Most of the effective secondary CBVE programs now in operation exhibit most of the facilitating elements.

## COMPETENCY-BASED VOCATIONAL EDUCATION

### A WORKING DEFINITION

A vocational education program is considered to be competency-based when it meets the following standards:

1. The program fully satisfies the criteria included in two essential categories (i.e., program competencies, and competency assessment).

2. The program exhibits most of the characteristics listed in two facilitating categories (i.e., instructional procedures, and administrative procedures).

The categories and indicators of each category are listed below.

### ESSENTIAL CATEGORIES

PROGRAM COMPETENCIES: The competencies that students are expected to achieve are:

1. derived from a rigorous analysis of the occupation,

2. verified by a committee of competent practitioners or their immediate supervisors (when they exist),

3. stated in terms of tasks performed by incumbent practitioners,

4. known by the student in advance of instruction.

COMPETENCY ASSESSMENT: Student mastery of the stated competencies is assessed so that:

1. students are required to perform tasks in a manner similar to those performed by incumbents in the occupation,

2. each student is individually assessed on each competency or cluster of competencies,

3. Related cognitive knowledge and desired attitudes are integral parts of competency assessment,

4. standards used in assessment are those expected of those entering that level of work, not other students,

5. criteria used in assessment are known by the student, in advance of assessment.

## FACILITATING CATEGORIES

INSTRUCTIONAL PROCEDURES: The instruction is designed so that:

1. instructional materials are keyed to competencies,
2. environments that duplicate or simulate the work place are available to students during competency development,
3. basic knowledge or background theory is learned as it is needed to support competency development,
4. each student is given continuous and detailed feedback on competency development,
5. a variety of learning styles and teaching strategies are provided for,
6. students with appropriate prerequisite skills and knowledge may bypass instruction on competencies already mastered,
7. students can progress through the program at different rates.

ADMINISTRATIVE PROCEDURES: The program is organized and supported so that:

1. program completion is based on satisfactory mastery of all competencies.
2. individual student records are maintained and reflect student progress at a given point in time,
3. materials, space, and equipment are available when needed by students and instructors,
4. the record-keeping system permits student transfer into and out of the program without requiring duplication of instruction on mastered competencies,
5. records of competency mastery are provided to students and prospective employers,
6. student grades reflect the level of achievement within competency mastery; in some programs, speed of learning may also be an appropriate factor in grading,
7. credit is given for competencies achieved as a result of instruction and for previously mastered competencies,

## METHODOLOGY

### General Overview

The two principal means for conducting this study were to: (1) validate an existing list of barriers to CBVE for secondary programs, and (2) conduct site visits to a selected number of secondary CBVE programs to confirm the barriers and to identify strategies and solutions to overcome the barriers. Some important preliminary activities were accomplished before the main events of the study could be begun, as follows:

1. Complete a review and synthesis of key professional literature and state documents as needed for background material.

2. Propose, confirm, and select a project advisory committee. The committee membership were representative of Florida secondary school leaders, vocational program areas, and research methodology.

3. Conduct a meeting of the advisory committee to review the proposal and provide input to barriers-identification activities.

4. Identify Florida secondary vocational programs that are high implementers of CBVE. This included entire school vocational programs, as well as individual exemplary programs in low implementing schools.

The first phase of identification of barriers had as its main objective the revision and confirmation of barriers to CBVE as specifically related to secondary school programs. This phase of the project was based on the results of a study completed by a team of investigators at the University of Central Florida. The project report presented a list of barriers to the implementation of CBVE in post-secondary vo/tech centers and community colleges. These were initially derived through a series of force field analysis sessions with vocational administrators and instructors, then verified by a modified Delphi consensus-building strategy and case studies. By using the resulting list of barriers from that study, the present study was able to operate efficiently, saving much time, effort, and money.

It became clear that there are some barriers that apply to post-secondary settings exclusively, while there are others that affect secondary programs but not vo/tech centers or community colleges. In revising the barriers list to identify secondary school barriers, the project staff reviewed the barriers statements, using professional judgment to delete statements that are clearly appropriate only to post-secondary programs. Added to the tentative list were barriers statements derived from the professional literature of CBVE that are unique or have special application to secondary programs. The newly constructed barriers statement list was then designed as a survey

instrument and sent as a pilot test to a sample of high CBVE implementing school administrators and teachers for verification and refinement.

## Project Advisory Committee

A project advisory committee of six members was selected and appointed to oversee the work of the project. In order to provide as wide a representation as possible, members were selected to include administrators and instructors of secondary vocational programs from a number of geographic regions of the state. Appendix A lists the advisory committee members. All advisory committee members had personal successful experience with comptency-based vocational education.

## Literature Search

A review of relevant professional literature on competency-based vocational education was conducted to identify barriers to secondary CBVE. The data base was essentially that of the previous barriers study. It was derived from computer searches of the Florida Education Resources Information Center (ERIC), Dissertation Abstracts, and a manual search. The literature was reviewed for stated and implied barriers specifically as they are relevant to secondary vocational programs. These sources provided the basis for the construction of tentative statements that were to be verified through personal responses by Florida vocational educators. The tentative barriers statements developed by the project staff were then presented to the project advisory committee for their review and recommendations. The statements were then refined and organized for further verification by school personnel.

## Pilot Test of Survey

The preliminary version of the secondary barriers statements was developed into a survey instrument, with 58 statements organized into eleven categories. A five-point rating scale was used to designate the degree of importance of the barrier to secondary CBVE programs. Open-ended responses were solicited so that respondents could comment on the barriers statements and add new statements about factors which they considered inadequately represented.

It was decided to pilot test the instrument on a group of secondary schools nominated as having fully functioning competency-based vocational programs. The pilot test was undertaken to test the instrument and its ease of use, and, more importantly, to determine whether the data-gathering procedures would provide the information needed. A select list of 15 nominated CBVE implementers was derived from two sources; (1) the project advisory committee, and (2) DVACE regional office consultants. The survey instrument was mailed to the secondary school principal, with instructions to complete the form

personally or to forward it to the appropriate person in the school for completion. After follow-up mailings and phone calls, 12 survey forms were ultimately returned for review.

A close examination of the returned instruments by project staff indicated that this data-gathering procedure was not likely to yield the desired information. Analysis of the responses revealed that the nominations of effective CBVE implementers proved unreliable. The responding pilot test schools showed a great range of implementation, based on the working definition of CBVE used by the investigators, from almost no implementation to moderate implementation. The respondents clearly had greatly varying views of what constituted CBVE in secondary schools, and seemed to exhibit incomplete understanding of the principles and practices of the approach to instruction. In several cases, the school principal or assistant principal for instruction was not familiar with details of the vocational instructional program in his/her institution.

In view of these results, it was decided to place major emphasis on gathering data and implementation information by personal interview and observation. Though this process is relatively time-consuming and expensive, it promised to be more useful for the purposes of the study. A total of 18 observation visits and/or interviews were completed. The sites for visitation were selected from among those secondary schools nominated by the advisory committee and other sources thought to be knowledgeable. They were chosen to represent a variety of vocational service areas and geographic areas of the state. In addition, two groups of school district support staff were interviewed about the barriers to CBVE experienced in their efforts to implement competency-based education in their schools. One group represented a large, urban school district, the other was from a smaller suburban and rural area. Several of the respondents requested that they and their schools not be identified in any way so they could speak freely. It was decided to extend this to all respondents and sites.

The general procedure was for one observer from the project staff, experienced in CBVE, to visit a program site and observe specific vocational programs in operation. A preliminary version of a CBVE program assessment instrument, then under development in another research project, was used to make a general determination of the degree of CBVE implementation. A copy of this assessment instrumemt is supplied in the Appendix. The observer then met with individuals in the school with a knowledge of the barriers to CBVE that had been experienced, and possible solutions to these barriers. The interviewees usually were one or more vocational teachers, and a school administrator or support staff member.

The project staff reviewed and analyzed the responses gathered at each of the institutions. The school situation and the observed degree of implementation of CBVE at the site were factors in the analysis. From this information an overall consensus was derived on the barriers statements. Possible solutions or coping mechanisms were developed from three sources: (1) successful strategies either observed or gathered in

the functioning CBVE programs visited, (2) recommendations by administrators and instructors in secondary schools attempting to implement CBVE, and (3) recommendations by project staff and consultants based on their experience and expertise in the field of competency-based education.

## RESULTS OF THE STUDY

The following section presents the findings of the study in terms of perceived barriers to competency-based vocational education in the secondary schools of Florida. The total of 57 statements is organized into eleven groups:

Group A - Administration
Group B - Teachers
Group C - Support Staff
Group D - Students
Group E - Physical Resources
Group F - Program Operation
Group G - School Procedures
Group H - School Climate
Group I - Teacher Training
Group J - State Education Agencies
Group K - Research and Evaluation Base

This is a grouping of convenience. Some statements have elements that are also relative to a group other than that in which they are placed. The order does not indicate the importance or effect of the barriers in that group, nor are all groups of equal weight.

It is important to understand that these statements are perceived barriers to CBVE; perceived by teachers and administrators in secondary schools, district staff, and outside experts on competency-based education. Some barriers may be as real and as tangible as an obsolete or broken-down machine in a laboratory. Other barriers are abstractions difficult even to express, and almost impossible quantify, like teachers' resistance to change. Still others may be founded on little more than misinformation or misperception.

No matter how concrete or abstract the barrier, it must nevertheless be acknowledged and dealt with. Barriers to CBVE will not disappear simply because vocational educators may believe the barriers are wrong. Administrative solutions must be found, coping mechanisms devised, and authoritative information disseminated if these perceived barriers are not to hinder the cause of CBVE in Florida.

BARRIERS TO THE IMPLEMENTATION
OF COMPETENCY-BASED VOCATIONAL EDUCATION
IN SECONDARY SCHOOLS

BARRIERS GROUP A - Administration:

A-1
Principals and support staff know little about CBVE, its essential elements, and specific requirements in secondary schools.

A-2
Principals express a negative attitude about CBVE, and fail to demonstrate commitment to CBVE goals.

A-3
Principals lack the skills needed to develop daily routines and management procedures for CBVE programs in secondary programs.

A-4
Principals are not willing or don't know how to provide the faculty inservice education, special resources, and motivation needed to overcome faculty resistance to change.

A-5
Principals believe CBVE is beyond the resources of their schools and school districts.

A-6
Principals lack the flexibility and creativity to accommodate an individualized CBVE instructional program in a highly structured administrative setting.

BARRIERS GROUP B - Teachers:

B-1
Secondary vocational teachers have insufficient knowledge about CBVE and are misinformed about it.

B-2
Teachers don't like what they have heard about how CBVE works in some secondary schools.

B-3
Teachers are most comfortable doing what they have been doing, and generally resist change.

B-4
CBVE is not perceived by teachers as an improvement over the existing model.

B-5
Teachers believe that students with weak basic skills cannot succeed in CBVE.

B-6
Teachers believe that it is difficult to motivate students in an individualized, self paced CBVE program.

B-7
Teachers believe that CBVE will seriously hamper their instructional creativity.

B-8
Teachers believe there will be new demands on their time after CBVE is implemented.

B-9
Teachers are not aware of opportunities to learn the skills needed to implement CBVE.

B-10
Teachers are not provided, or do not utilize, the planning time they need to develop and reorganize programs into a CBVE format.

B-11
Teachers' collective-bargaining agreements inhibit the planning and implementation required to establish CBVE programs.

B-12
Teachers lack the skills needed to organize and produce the required support materials.

B-13
Teachers perceive vocational education in secondary schools as being exploratory, and thus not appropriate for CBVE.

BARRIERS GROUP C - Support Staff:

C-1
Few secondary schools have CBVE-trained curriculum and program development specialists to assist faculty members with program start-up and operational assistance.

C-2
School personnel who are concerned with curriculum change are not the people who have the authority to effect change.

C-3
Teachers have little access to clerical, media, and graphic arts assistance needed for CBVE development.

C-4
School counselors are not well informed about CBVE and do not support students enrolling in such programs.

BARRIERS GROUP D - Students:

D-1
CBVE requires students who are self-directed and who can assume responsibility for their own learning of occupational skills.

D-2
Students prefer to work in regimented total-group situations, and have difficulty in working effectively as individuals or in small groups.

D-3
The need to accept mainstreamed special education students in job-preparatory programs creates difficulties in terms of instruction and program management.

BARRIERS GROUP E - Physical Resources:

E-1
CBVE requires that training be supported with up-to-date and appropriate equipment. Secondary schools find it difficult to obtain the equipment, keep it current, and maintain it in proper working condition.

E-2
Physical facilities designed for conventional programs are often ill-suited for the multiple activities of CBVE.

E-3
Secondary schools are not able to keep facilities open and available when needed by individual students beyond class normal hours.

E-4
Individualized CBVE programs require use of more audiovisual equipment and materials than conventional programs; this is often difficult to finance, maintain, schedule, and utilize.

E-5
CBVE instructional programs require more printed materials and instructional supplies than conventional programs. Printing, storing and distributing learning guides and individualized learning materials require a great deal of resources.

E-6
Secondary schools have difficulty locating and acquiring appropriate CBVE instructional materials.

BARRIERS GROUP F - Program Operation:

F-1
It is difficult to develop satisfactory occupational tasks listings; listings obtained from DVACE or other sources may be inadequate, and inconsistent with the principles of CBVE.

F-2
It is difficult to select competencies that are appropriate for orientation and exploratory programs and yet are valid occupational skills.

F-3
Curricula materials sent by the State Department of Education are often inadequate or inconsistent with the definition of CBVE.

F-4
CBVE programs require a great deal of student assessment and student progress documentation.

F-5
CBVE program designs require teachers to spend inordinate amounts of time and effort in student record keeping and reporting.

F-6
CBVE does not well fit traditional grades or school grading procedures.

F-7
The open-entry/open-exit feature of CBVE is difficult or impossible to implement in secondary schools.

F-8
Secondary schools have time constraints that do not fit well with individual learning rates; students therefore may not be fully prepared for entry-level employment.

BARRIERS GROUP G - School Procedures:

G-1
The way individual shops and labs are organized makes it difficult to schedule students and facilities as needed in a CBVE environment.

G-2
Traditional methods of funding do not provide funds needed for program modification, CBVE start-up, additional equipment and materials, or staff time for program development.

BARRIERS GROUP H - School Climate:

H-1
Many secondary schools are oriented toward academic programs. Thus, it is difficult to get institutional support and resources for CBVE program improvement.

H-2
School boards and school district administration do not understand CBVE are reluctant to modify policies and procedures to better meet the needs of CBVE.

H-3
It is difficult to achieve cooperation and coordination of the CBVE programs in the secondary schools within a school district.

BARRIERS GROUP I - Teacher Training:

I-1
Teacher education programs do not adequately prepare vocational teachers for CBVE in secondary schools.

I-2
Vocational teacher education programs do not use competency-based methods in their own programs.

I-3
Inservice education programs and workshops are not available to teachers to help them implement CBVE.

I-4
Many instructional materials produced by the DVACE are inadequate and unuseable for training teachers to establish CBVE programs.

BARRIERS GROUP J - State Education Agencies:

J-1
DVACE personnel are poorly informed about CBVE, and have little or no actual personal experience in instruction or management in CBVE programs.

J-2
DVACE policies communicate mixed messages to local schools about DVACE commitment and direction relative to CBVE. DVACE personnel commitment appears to be mostly verbal without implementation or follow-through.

J-3
There is a lack or coordination between DVACE and local education agencies (LEA's).

J-4
There is a lack of a comprehensive State CBVE implementation plan and policies.

J-5
There are few, if any, meaningful, state-provided incentives (financial and non-financial) to schools, administrators and faculty to implement and maintain CBVE.

J-6
New state teacher-assessment programs foster traditional expository teaching and ignore or hinder continued development and implementation of CBVE; teachers get little or no recognition for the kind of teaching they do in CBVE programs.

BARRIERS GROUP K - Research and Evaluation Base:

K-1
The data base of research and evaluation on CBVE is too small and there is too little evidence of the success of CBVE in Florida's secondary schools.

K-2
Local education agencies require demonstration of positive results before they move in the direction of CBVE.

## Comments on Barriers Statements

The following section consists of comments by the project staff on the barriers statements and on the barriers themselves. The comments deal with a group or category of barriers and treat them as related ideas. The solution strategies and coping mechanisms included in this section were derived from all the information obtained during the conduct of this study; i.e., from the literature review, advisory committee discussion, site visits, and interviews with school personnel.

This section does not reproduce the comments and possible solutions given in the final report of the study of barriers to CBVE in postsecondary vocational education. Many barriers to secondary CBVE are parallel with those of postsecondary CBVE, and the possible solutions are very similar, or in some cases even identical. However, repetition of the previous study's report on each barrier statement would be voluminous and inefficient of space. The interested vocational educator is advised to refer to that report; Identification and Description of Barriers to the Implementation of Postsecondary Competency-Based Vocational Education, pages 134-192.

### BARRIERS GROUP A - Administration

It has become increasingly clear that the local administrator, the secondary school principal, is the single most crucial factor in the implementation of CBVE. In schools where CBVE is established and progressing there is a principal who is committed to the concept and determined to make it succeed. Where the principal is apathetic about CBVE or poorly informed, there will be at most an isolated teacher struggling to maintain a vocational program with a few CBVE principles and practices incorporated.

The evidence is that secondary school principals as a group are not well informed and do not possess the skills needed to establish CBVE programs. Much needs to be done at both the state and local level to convince principals of the benefits of this instructional approach, and to train them in the essential skills they lack. Published documents on implementing CBVE do not appear to be effective; few principals knew of the existence of readily available reports and sourcebooks already produced by the state, and fewer had read them. They would apparently welcome, however, a central clearinghouse on CBVE with consultants and materials from which they might draw.

Barriers A-5 and A-6 deserve special mention. Both urban and rural principals believe that CBVE is beyond the resources of their schools. The requirements of verified task lists, performance measures, and learning guides seem overwhelming, and they do not know how to solve the problem with cooperative effort. Unless an entire school district, a consortium of districts, or the DVACE produce and make available these basics, principals will tend to dismiss CBVE as not for their schools.

Principals also lack the ability to develop strategies for individualized and self paced instruction. The questions are indeed difficult. What do you do with a student who completes the specified competencies early? How do you treat the slower learner so he/she can develop a valuable cluster of marketable skills? How can a school avoid duplicating the teaching of the same skills in different vocational programs? Secondary principals might well benefit from CBVE consultants who could work with them in the actual school situation to devise solutions to these kinds of instructional and administrative questions.

## BARRIERS GROUP B - Teachers

There are a host of barriers to CBVE that relate to vocational teachers. Anyone familiar with the implementation of CBVE at any school level will not find them surprising. A number of these barriers can be categorized as "people problems," i.e., people's resistance to change, tendency toward indolence, and anxiety about learning new skills.

The recommendations made in the previous report apply here as well. Training in CBVE implementation skills, providing accurate information, and leading teachers through the change process are all called for. Unfortunately, because principals are themselves not usually trained to implement change, the situation is one of being stuck on dead center. Outside help, either from the school district or state, is indicated. The training, to be most effective, should be delivered to all vocational teachers in a school, not to teacher groups in state or regional workshops.

Barrier B-13, "Teachers perceive vocational education in secondary schools as being exploratory, and thus not appropriate for CBVE," is a critical one. Teachers who view secondary vocational education as not leading directly to entry-level employment cannot see the need to rigorously identify the skills of the occupation, and do not agree with the concept of requiring students to master each specified competency. The systematic approach to instruction and student performance assessment does not fit well with the goals of their program. Until secondary vocational educators clarify the purposes of vocational education, and teachers accept those purposes, there will continue to be great resistance to CBVE at this level of education.

## BARRIERS GROUP C - Staff Support

The existence and influence of the four barriers related to staff support appears to vary widely among secondary schools. Administrators and teachers in some schools report that they have adequate staff support, and that the implementation of CBVE is in no way hampered on this account. To personnel in other schools, the lack of a curriculum specialist, and inadequate clerical and media production assistance is perceived as critical; an almost insurmountable barrier to CBVE. There may be doubts about the accuracy of these perceptions, but there is no

doubt about the need for support services if CBVE is to succeed. Any vocational administrator in a secondary school aiming to implement CBVE should look to the adequacy of support services, and organize the necessary resources before teachers are asked to revise the curriculum.

As in postsecondary CBVE, the presence of a well qualified curriculum specialist who assists teachers in program development tends to clearly differentiate schools that have successfully implemented CBVE from those that have not. However, it is important that the curriculum specialist (or assistant principal for instruction) is thoroughly knowledgeable about vocational education and committed to CBVE. Evidence indicates that at present very few secondary curriculum persons meet these criteria.

BARRIERS GROUP D - Students

Research results from several sources indicate that students understand and enjoy the competency-based approach to vocational instruction. They do not constitute a serious barrier to CBVE. Because their schooling has largely taken the form of time-based group instruction, new vocational students in CBVE programs require a period of training and adjustment. After that, they have little trouble following the procedures and accepting responsibility for their work. For many, a CBVE program will be their first experience in real school success and accomplishment.

No matter what the instructional setting, individual students may find difficulty in learning. For the relatively few who seem to work best in group situations the CBVE teacher can organize small groups to work cooperatively on an occupational skill, and can devise total group instructional units to vary the classroom and laboratory routine. It appears that it is teachers' perceptions of students, rather than student limitations themselves, that may be the barrier.

Mainstreamed special education students do pose a unique problem to CBVE. Depending on their exceptionality, special education students may not be able to accomplish certain of the specified program competencies, or may achieve so slowly that a series of competencies leading to a marketable skill is not possible in the time available. In other cases, all that is required is a modified learning environment or individual assistance. The serious problem of teacher acceptance of exceptional students apparently still persists.

Successful secondary vocational programs for exceptional students have usually developed personalized training programs. In these the individual student's abilities and needs are carefully analyzed, and a personal series of achieveable occupational goals may be limited to basic and simple jobs (e.g., custodial services, kitchen helper, service station attendant) but the competency-based program provides the necessary training for the individual to succeed.

BARRIERS GROUP E - Physical Resources

There is little essential difference between CBVE programs and conventional vocational programs in the need for adequate physical resources. In both, up-to-date tools and equipment are required, sufficient space for the appropriate occupational training activities must be provided, and students must have convenient access to the learning resources. The only major difference is that in CBVE programs it is easier to tell whether the resources are in fact appropriate and adequate. Secondary vocational personnel do contend that they have greater difficulty in securing resources than their postsecondary counterparts.

In the matter of printed instructional materials and media materials there is a significant barrier to CBVE. Secondary schools report that they do not have the facilities or the money to produce the volumes of printed materials required. They are vocal in their demand that the local school district or the state take on the responsibility. In particular the lack of high quality student learning guides is perceived as a serious barrier to CBVE; one that will halt the progress of implementation until a planned solution is found, and a substantial effort is made to correct the situation. Comments were made that the present state effort to disseminate CBVE instructional materials is weak, fragmentary, and often produces unusable materials.

BARRIERS GROUP F - Program Operation

The barriers identified in this category are a mixed bag. For most of them, the solutions recommended for postsecondary CBVE programs are equally appropriate for secondary schools. Secondary teachers and principals simply must examine each barrier individually and devise strategies for overcoming them. It is heartening that schools have put procedures into place that do successfully deal with these perceived barriers.

There are two perceived barriers that may not be as significant as they seem to vocational educators who have not actually attempted CBVE implementation: i.e., the provision of open-entry/open-exit enrollment procedures, and student grading. Open-entry/open-exit is an administrative devise that is a desirable feature of CBVE and it has great benefits to the adult learner. It is certainly not an essential element of CBVE however. Therefore secondary school programs can do without it, using their traditional enrollment procedures to no great detriment to their students. Again, ideally, in CBVE traditional grading systems are not needed because all students are expected to master all specified competencies. If a grading system is seen as desirable to motivate secondary students and conform to local practice, a reasonable one can be devised, using as models the many that are now in operation in various schools implementing CBVE.

Selecting competencies suitable for orientation and exploratory programs constitutes a significant barrier that demands a fresh and

thorough effort to solve. The successful JAVA Project in Kentucky may well provide basis for a new approach to secondary vocational education, and should be thoroughly investigated. The orientation and exploratory phases of this career ladder program consist of occupational competencies selected using the following criteria: (1) the tasks have general education value for all students, (2) the tasks represented as many specific occupations in the occupational cluster as possible, (3) the skills learned actually contribute to the early skills of the occupational training program, and (4) the tasks are realistic for the grade, maturity level, and the time available.

BARRIERS GROUP G - School Procedures

There were only two barriers to CBVE identified in this group. The first, on the organization of shops and laboratories, was weakly supported. The second, on the lack of adequate funding, was strongly supported. Respondents reiterated the need for special funding for CBVE start-up costs. Funds for maintaining an operating CBVE program were usually seen as adequate. New ideas for reallocating funds was often called for.

BARRIERS GROUP H - School Climate

The three barriers in this section were highly variable. Some secondary schools reported no problems at all in integrating CBVE in the school's overall instructional program. On the other hand, personnel in a few schools considered the school climate issue a significant barrier. School administrators will therefore need to examine their local situations to determine how much thought and effort should be allocated to these barriers.

BARRIERS GROUP I - Teacher Training

The general agreement about the inadequacy of teacher training for CBVE was high. There were few reports of university teacher education programs making a contribution to the preparation of teachers for CBVE. The useful teacher training was seen as coming from local school districts.

In fairness to colleges of education, it must be admitted that they are in an uncomfortable position. Most teaching jobs taken by their graduates will be in conventional secondary vocational programs, not competency-based ones. If they do emphasize training for CBVE, they will for the most part be preparing teachers for roles that do no yet exist. In spite of this dilemma, it is the general opinion of school personnel the vocational teacher education programs must assume a more definite leadership stance, helping preservice and inservice teachers with the skills they need to establish and maintain CBVE programs. The required competencies are known, and instructional materials are readily available to deliver the much needed instruction.

## CONCLUSIONS

The conclusions to be drawn from this study are imbedded in the barriers statements themselves. These barriers to the implementation of CBVE in secondary schools, as perceived by vocational educators, must be dealt with on an individual basis if progress is to be made. Nonetheless, a few generalizations are in order.

As in postsecondary vocational education, there appears to be less implementation of CBVE in Florida's secondary schools than is generally reported. Observation of reputed CBVE programs show that many fail to meet the essential characteristics of CBVE as expressed in the working definition of this study. Some of this difference between self-report and observation stems from confusion about the terms "competency-based," "individualized," and "self paced" instruction.

The two most apparent weaknesses in CBVE programs are also the two essential elements; occupational competency identification, and student assessment of each specified competency. Secondary schools are of various minds as to what competencies are to be identified and how they are to be identified. There is confusion as to whether vocational programs are to be orientation, exploration, or rigorous entry-level training programs. This directly affects the competencies that students are expected to achieve, and to what level of skill they are to be held.

The standard practice now seems to be for a program developer to locate whatever lists of occupational skills are available, and to select from those lists the ones that will be included in the local program. Even in a district program that is attempting to fully implement CBVE, the process of competency identification not strong. In this case, instructors meeting in groups determine competency lists by consensus. This is open to all kinds of difficulties; political give and take, preferences of instructors, outdated information, and incomplete information, among others.

Serious consideration should be given to the idea that the DVACE should take a more direct role in curriculum development for CBVE. Because secondary schools have great difficulty in identifying occupational program competencies and devising performance measures, the DVACE could take on the responsibility for developing verified competency lists for all of the common vocational programs being offered in the state. It could also produce student performance assessment measures and a performance checklist for each identified competency. These curriculum materials would enormously facilitate and speed the adoption of CBVE in the state's secondary schools and would not require an inordinate amount of resources.

The school principal is the crucial element in implementation of CBVE. One who is knowledgeable, committed, and creative can overcome barriers to CBVE. Part of this is because a number of barriers to CBVE are "people problems" rather than tangible or concrete difficulties. School personnel were characterized by respondents as having anxieties,

being misinformation, resistant to change, and indolent. These call for the principal's skillful use of change strategies, information dissemination, and assistance.

There are several possible patterns for the implementation of CBVE in secondary schools. If they are carefully designed, they can utilize the potential of CBVE for program improvement and yet stay within the limits of secondary school structure and resources. The Division of Vocational, Adult, and Community Education should seriously consider organizing at least one demonstration site for CBVE in a typical comprehensive high school. Support in the form of start-up funds and expert consultation services would be required, and should continue over several years until the program was fully functional.

This points to the continuing urgent need for a comprehensive state plan for the establishment of CBVE. The plan should provide for the development of policy for CBVE, coordination of effort by several bureaus of the DVACE, and utilization of all available resources for the implementation of CBVE. The plan is as needed now as it was ten years ago when first proposed.

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APPENDIX

SECONDARY BARRIERS TO CBVE

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IDENTIFICATION OF BARRIERS

TO THE IMPLEMENTATION OF CBVE

IN SECONDARY SCHOOLS

PROJECT ADVISORY COMMITTEE MEETING

May 3, 1985

Agenda

| | |
|---|---|
| 9:30 | INTRODUCTIONS |
| | TRAVEL PAPERS |
| | BACKGROUND OF THE PROJECT |
| | Working Definition of CBVE<br>Postsecondary barriers project<br>Project methods |
| | REVIEW OF TENTATIVE BARRIERS STATEMENTS |
| 12:00 | LUNCH |
| 1:00 | ADDITIONAL BARRIERS TO SECONDARY CBVE |
| | STRATEGIES FOR OVERCOMING BARRIERS |
| | RECOMMENDATIONS FOR SITE VISITS |
| 2:30 | ADJOURN |

FIELD TEST VERSION

# PROGRAM DESCRIPTION

# INSTRUMENT
For

# OCCUPATIONAL VOCATIONAL EDUCATION PROGRAMS

Field Test Draft

June, 1985

Robert R. Lange
University of Central Florida

# PREFACE

Occupational Vocational Education programs are designed to prepare students for entry level employment in specific occupations or occupational clusters. The program design and instructional strategies used in vocational education are diverse and vary by occupational area and across programs within a single occupational area. This program description instrument was developed as a tool for use in documenting the program design and instructional strategies used in a single occupational program within one institution.

The Program Description Instrument is intended for use by vocational educators during a program site visit. The instrument is completed after an interview with the instructor(s), an interview with 2-3 of the more advanced students, and an examination of a sample program instructional and program management material.

Based on the interviews and examination of documents, the visitor reports the extent to which the list of descriptors fit the program.

Because of the diversity in Vocational Educational programs, there is a long list of descriptors within each part of the instrument. Many of the descriptors will not apply to a specific program. No program could use all of the techniques included within each list.

## Program Profile

The descriptors can be used to construct a program profile across seven (7) properties of vocational programs.

(1A) Knowledge/Theory Instruction
(1B) Performance Instruction
(2) Individual Planning
(3) Program Content Specification
(4A) Knowledge/Theory Assessment
(4B) Performance Assessment
(5) Program Management

The profile indicates the extent to which a program is described as "more competency-based" or "more conventional" on each of the five properties. Instruction for constructing the program profiles are included in another document: Vocational Education Program Description Profile Development.

## Describing the Program

The program is described by recording the extent to witch each descriptor applies to the program. The following codes are used:

0 = not at all
1 = low extent
2 = moderate extent
3 = high extent

Example:

| DESCRIPTOR |
| --- |
| Audiovisual materials such as films, video, tapes, slide sets, etc., are viewed by the whole class at the same time. |

If the descriptor statement applies to the program to a high extent, record a "3" in the box

If the descriptor does not apply, record an "0" in the box.

PROGRAM VISITOR _____
PRINT Name

PROGRAM VISITED: _____
School

_____
Program Name

_____
Instructor(s)

Background Information

1. The students are: (check)
   Postsecondary only

   Secondary only

   Both Postsecondary & Secondary

2. How many students are enrolled now?

   _____ Postsecondary _____ Secondary

   Typically how many students are enrolled?

   _____ Postsecondary _____ Secondary

3. About what % of the post-secondary students are full time?

   _____

4. What occupations/jobs do students get when they complete the program? (list)

   _____

   _____

   _____

   _____

   _____

## 1.0 INSTRUCTIONAL STRATEGIES

### 1A KNOWLEDGE/THEORY INSTRUCTION

DESCRIPTORS

0=not at all
1=low extent
2=moderate ext
3=high extent

1A.1 Instructor/student interaction takes place during one-on-one or small group sessions.

1A.1

1A.2 Instructor/student interaction takes place during whole-class classroom sessions.

1A.2

1A.3 Students use instructional materials on their own whenever the student is ready for specific content.

1A.3

1A.4 Students rely on the instructor for directions when working with instructional materials.

1A.4

1A.5 Students study a topic:

1A.5.a until they achieve the required level.

1A.5.a

1A.5.b as determined by an instructor's schedule.

1A.5.b

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|

1A.6 Students study knowledge, theory, or special background material:

1A.6.a at varying times, when they are learning the related performance task/skill. 1A.6.a

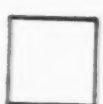
1A.6.b at varying times, but independent of task/skill performance sequence. 1A.6.b

1A.6.c at the same time as other students, i.e., according to an instructor's schedule or text sequence. 1A.6.c

1A.7 Faster learning students:

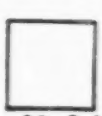
1A.7.a go on to new topics when they are ready. 1A.7.a

1A.7.b use extra time to help slower students and/or study enrichment or general interest material. 1A.7.b

1A.7.c do other things and wait for the class to catch up.  1A.7.c

1A.8 Slower learning students:

1A.8.a stay on a topic until they have achieved the level required. 1A.8.a

1A.8.b achieve as much as they can, then go onto a new topic when the scheduled time limit is reached.  1A.8.b

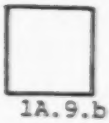
| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|

1A.9 Instructors revise or replace the instructional materials:

1A.9.a when there are modifications in entry level job tasks.

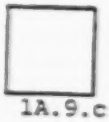
1A.9.a

1A.9.b when new or updated materials better match the program tasks/skills.



1A.9.b

1A.9.c for reasons unrelated to task/skill statements, such as appearance or new editions.



1A.9.c

1B PERFORMANCE

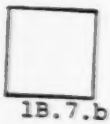
| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|
| 1B.1 Instructor/student interaction takes place during one-on-one and small group sessions. | ☐ 1B.1 |
| 1B.2 Instructor/student interaction takes place during whole-class lab/shop sessions. | ☐ 1B.2 |
| 1B.3 Students use instructional materials that enable them to begin task/skill development when they are ready. | ☐ 1B.3 |
| 1B.4 Students wait for instructor assignments before working on task/skill development. | ☐ 1B.4 |
| 1B.5 The instruction is group-paced, i.e., most students work on the same task/skill during a lab/shop session. | ☐ 1B.5 |
| 1B.6 The instruction is self-paced, i.e., students work on task/skill development on their own, independent of the tasks/skills other students are working on. | ☐ 1B.6 |

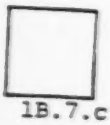
DESCRIPTORS

0=not at all
1=low extent
2=moderate ext.
3=high extent

1B.7 Students:

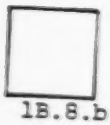
1B.7.a use learning guides or instructional materials keyed to program tasks/skills. 1B.7.a

1B.7.b rely on instructor demonstrations and instructions.  1B.7.b

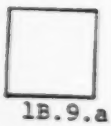
1B.7.c use lab manuals, workbooks, and other materials related to topics.  1B.7.c

1B.8 Students practice a task/skill:

1B.8.a as long as they need to achieve the skill. 1B.8.a

1B.8.b as determined by instructor schedule.  1B.8.b

1B.9 When the faster learning students complete the task, they:

1B.9.a go on to the next task.  1B.9.a

1B.9.b help other students or assist the instructor with shop/lab duties, paperwork. 1B.9.b

1B.9.c continue practicing the same task/skill. 1B.9.c

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|

1B.10 Slower learning students:

1B.10.a stay on a task/skill until they have achieved the required level of proficiency. ☐ 1B.10.a

1B.10.b achieve proficiency in fewer skills within the scheduled time limits. ☐ 1B.10.b

1B.10.c are exposed to the same number of skills, but achieve less proficiency within the scheduled time limits. ☐ 1B.10.c

1B.10.d drop the program and/or transfer to another program. ☐ 1B.10.d

1B.11 Instructors revise or replace the instructional materials:

1B.11.a when there are modifications in entry level job tasks ☐ 1B.11.a

1B.11.b when new or updated materials better match the program tasks/skills. ☐ 1B.11.b

1B.11.c for reasons unrelated to task/skill statements, such as appearance or new editions. ☐ 1B.11.c

DESCRIPTORS

0=not at all
1=low extent
2=moderate ext.
3=high extent

1B.12 Students are assigned to live work (customer work) based on:

1B.12.a customer demands and student availability irrespective of student learning sequence. ☐ 1B.12.a

1B.12.b student need for task practice and appropriateness to student learning sequence. ☐ 1B.12.b

1B.13 Student task/skill practice activities:

1B.13.a are based on generalized practice activities that do not duplicate or simulate actual work conditions. ☐ 1B.13.a

1B.13.b are based on live work (customers, etc.) or simulation of live work. ☐ 1B.13.b

## 2.0 INDIVIDUALIZATION

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|
| 2.1 Students with previous training or experience who demonstrate the ability to perform a task/skill skip instruction on that task/skill. | ☐ 2.1 |
| 2.2 Regardless of previous training or experience, students are required to receive instruction and progress through the program in the same way as all other students. | ☐ 2.2 |
| 2.3 Students receive <u>knowledge/theory</u> instruction through: | |
| 2.3.a large group lecture/demonstration | ☐ 2.3.a |
| 2.3.b modules or learning guides | ☐ 2.3.b |
| 2.3.c audio visual materials | ☐ 2.3.c |
| 2.3.d one-on-one and/or small group instructor/ student interaction | ☐ 2.3.d |
| 2.3.e one-on-one and/or small group student/ student interaction | ☐ 2.3.e |
| 2.3.f simulation activities, e.g., role play models, manikins. | ☐ 2.3.f |

Item 2.3 continued on next page

DESCRIPTORS

0=not at all
1=low extent
2=moderate ext.
3=high extent

2.3 (cont'd)

2.3.g general field experience (e.g., observation, field trips, unspecified work assignments, coop). 2.3.g

2.3.h live work, field experience (e.g., clinic, school shop, coop, job site); includes contracts for specific knowledge/theory learning. 2.3.h

2.4 Students receive <u>task/skill</u> instruction through:

2.4.a large group lecture/demonstration 2.4.a

2.4.b modules or learning guides 2.4.b

2.4.c audio visual materials 2.4.c

2.4.d one-on-one and/or small group instructor/student interaction 2.4.d

2.4.e one-on-one and/or small group student/student interaction 2.4.e

2.4.f simulation activities, e.g., role play, model office, model job, manikins. 2.4.f

2.4.g general field experience (observation, field trips, unspecified work assignments, coop). 2.4.g

Item 2.4 continued on next page

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|

2.4 (cont'd)

2.4.h live work, field experience (e.g., clinic, school shop, job site); contracted for specific task/skill learning. ☐ 2.4.h

2.5 When learning a task/skill, students:

2.5.a use the same learning activities and materials as other students ☐ 2.5.a

2.5.b select learning activities that best match their learning styles (modalities). ☐ 2.5.b

2.6 Students with different career objectives negotiate a written individual learning plan by selecting specific tasks/skills. ☐ 2.6

2.7 Students in the program are expected to complete all tasks/skills without exceptions or variations. ☐ 2.7

2.8 Students are considered to be program completers when they:

2.8.a achieve their required tasks/skills ☐ 2.8.a

2.8.b have the required clock hours and a passing grade. ☐ 2.8.b

## 3.0 PROGRAM CONTENT SPECIFICATION

DESCRIPTORS

0=not at all
1=low extent
2=moderate ext.
3=high extent

3.1 The program content describes:

3.1.a tasks/skills to be learned. 3.1.a

3.1.b topics, units, subject matter to be covered. 3.1.b

3.2 The knowledge content statements:

3.2.a describe observable and/or measurable behaviors (e.g., calculate, solve, select) 3.2.a

3.2.b describe specific products or outcomes (e.g., list basic food groups). 3.2.b

3.2.c describe general topics (e.g., circulatory system, metals) 3.2.c

3.2.d describe understandings and/or appreciations (e.g., know, appreciate) 3.2.d

3.3 The performance content statements:

3.3.a describe observable and/or measurable behaviors (e.g., align, type). 3.3.a

3.3.b describe specific products or outcomes (e.g., manicure nails, install door frames). 3.3.b

Item 3.3 continued on next page

DESCRIPTORS

0=not at all
1=low extent
2=moderate ext
3=high extent

3.3.c describe general topics (e.g., brakes, telephone techniques). ☐ 3.3.c

3.3.d describe understandings or appreciations (e.g., know, appreciate). ☐ 3.3.d

3.4 The program content statements were:

3.4.a derived from published task/skill lists such as V-TECS or other sources. ☐ 3.4.a

3.4.b derived from current texts and/or instructional materials. ☐ 3.4.b

3.4.c based on the instructor's work experience ☐ 3.4.c

3.4.d derived from a specific study or local occupational analysis. ☐ 3.4.d

3.4.e arrived at by consensus of instructor committee. ☐ 3.4.e

3.5 After the program content statements are selected or created, they are reviewed/ verified by:

3.5.a the program advisory committee. ☐ 3.5.a

Item 3.5 continued on next page

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|

3.5 (cont'd)

3.5.b a group of workers from local job sites. ☐ 3.5.b

3.5.c the instructor through personal field contacts. ☐ 3.5.c

3.5.d committee of instructors. ☐ 3.5.d

3.6.e the instructor. ☐ 3.5.e

3.6 The program content statements are regularly updated to reflect changes in the occupation by:

3.6.a a program advisory committee. ☐ 3.6.a

3.6.b group of workers from local job sites. ☐ 3.6.b

3.6.c instructor through personal field contacts. ☐ 3.6.c

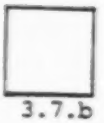
3.6.d committee of instructors. ☐ 3.6.d

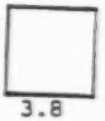
3.6.e the instructor. ☐ 3.6.e

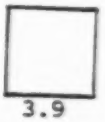
| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|

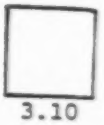
3.7 Students have a copy of:

3.7.a the list of program tasks/skills. 3.7.a

3.7.b the course outline or syllabus.  3.7.b

3.8 Students find out what to learn by relying on the content of the books, materials, presentations, and assignments.  3.8

3.9 Students rely on the instructor to tell them what they will learn in the program.  3.9

3.10 Students regularly note their progress by referring to a list of program tasks/skills.  3.10

## 4A ASSESSMENT OF KNOWLEDGE/THEORY

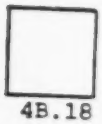
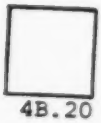
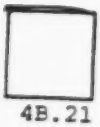
| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|
| 4A.1 Students have access to a written description of what they will be expected to know before they take a test. | 4A.1 |
| 4A.2 Students are unsure of what they will be expected to know during a test. | 4A.2 |
| 4A.3 Students can describe what they will be expected to know during a test. | 4A.3 |
| 4A,4 Tests are constructed to show a range of student achievement. | 4A.4 |
| 4A.5 The passing level on a test is based on a percentage or some fixed score. | 4A.5 |
| 4A.6 The passing level on a test is based on the level of knowledge expected of entry level employees. | 4A.6 |
| 4A.7 Tests are taken from texts or oth r sources or constructed without a planned effort to match program tasks and skills. | 4A.7 |
| 4A.8 Tests are constructed to match the list of program tasks and skills. | 4A.8 |
| 4A.9 Students take different tests at different times. (when they are ready) | 4A.9 |

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|
| 4A.10 Students take a specific test at the same time. | ☐ 4A.10 |
| 4A.11 Instructors review test results individually with students. | ☐ 4A.11 |
| 4A.12 Instructors review test results with the whole class. | ☐ 4A.12 |
| 4A.13 A student is retested on skills not initially achieved. | ☐ 4A.13 |
| 4A.14 A student can take a test only once. | ☐ 4A.14 |
| 4A.15 Students must pass a test on knowledge of process and/or safety before they work on lab/clinic performance. | ☐ 4A.15 |

4B ASSESSMENT OF PERFORMANCE

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|
| 4B.1 There is a written description of the criteria for successful performance of each task/skill. | ☐ 4B.1 |
| 4B.2 There is no written description of the criteria for successful performance. | ☐ 4B.2 |
| 4B.3 Students can describe the criteria for successful performance on each task/skill performance. | ☐ 4B.3 |
| 4B.4 Students are unsure of the criteria for successful performance. | ☐ 4B.4 |
| 4B.5 Program task/skill <u>assessment criteria</u>: | |
| 4B.5.a use general terms to describe skill performance such as: "effectively", "carefully", "as judged by the instructor". | ☐ 4B.5.a |
| 4B.5.b use specific terms which describe quality distinctions in process or product, such as: "within five minutes", "within a tolerance of .2 mm", "with no welding splatter". | ☐ 4B.5.b |
| 4B.5.c fail to make quality distinctions, e.g., may only list or relist task procedures or steps. | ☐ 4B.5.c |
| 4B.6 Most students demonstrate skill performance <u>at different times</u>, i.e., when they have acquired the necessary skill. | ☐ 4B.6 |
| 4B.7 Students demonstrate skill performance at times <u>selected by the instructor</u>, irrespective of their readiness. | ☐ 4B.7 |

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|
| 4B.8 Instructors provide an individual critique on the task/skill performance. | 4B.8 |
| 4B.9 Although student skill performance may be individually evaluated, the instructor provides a critique to the group on task/skill performance. | 4B.9 |
| 4B.10 Each student individually demonstrates every agreed-upon task/skill to the acceptable level. | 4B.10 |
| 4B.11 Students can achieve a satisfactory rating on a task performance without correctly demonstrating all critical aspects of the task, e.g., "averaging." | 4B.11 |
| 4B.12 Students demonstrate skill performance in groups. | 4B.12 |
| 4B.13 Performance test criteria are based on the skills performed by new employees in the occupation. | 4B.13 |
| 4B.14 Performance tests are constructed without a planned effort to match the program tasks/skills. | 4B.14 |
| 4B.15 Performance test requirements match the program tasks/skills. | 4B.15 |
| 4B.16 Performance tests change when the description of program tasks/skills changes. | 4B.16 |
| 4B.17 A student may demonstrate skill performance only once. | 4B.17 |

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|
| 4B.18 A student has more than one opportunity to demonstrate skill performance. |  <br>4B.18 |
| 4B.19 Written test items are used only to check the ability to perform written job tasks. | <br>4B.19 |
| 4B.20 Written tests are used as substitutes for performing "hands-on" skills. |  <br>4B.20 |
| 4B.21 Students demonstrate skill performance in situations that match actual job conditions. |  <br>4B.21 |

4C STUDENT GRADING

DESCRIPTORS

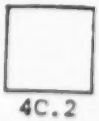
0=not at all
1=low extent
2=moderate ext.
3=high extent

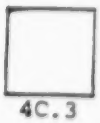
4C.1 Student employability skills are:

4C.1.a included as factors in evaluating and reporting skill performance. 4C.1.a

4C.1.b evaluated and reported separately from skill performance. 4C.1.b

4C.1.c not considered in grading. 4C.1.c

4C.2 Student grades are based on the level of student achievement relative to other students in the program.  4C.2

4C.3 Student grades are based on achievement of pre-established performance criteria.  4C.3

4C.4 A high score on some tests can help make up for a low score on other tests. 4C.4

4C.5 Student grades are based on the number of tasks/skills achieved within a grading period. 4C.5

4C.6 A student's grade in a grading period is based on an average of individual knowledge and skill performance. 4C.6

4C.7 Scores on tests are not averaged; performance on each test must meet pre-established standards. 4C.7

## 5.0 ADMINISTRATIVE DETAIL

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext<br>3=high extent |
|---|---|
| 5.1 Students have ready access to records of their tasks/skills achieved and those yet to be achieved for program completion. | ☐ 5.1 |
| 5.2 Students rely on the instructor to inform them of the tasks/skills they've achieved and those remaining to be completed. | ☐ 5.2 |
| 5.3 There are individual student record sheets that are kept current and represent the tasks completed by students. | ☐ 5.3 |
| 5.4 When students exit a program, they are provided with records that: | |
| 5.4.a contain primarily time of enrollment and grade for the enrollment period. | ☐ 5.4.a |
| 5.4.b indicate the specific tasks/skills achieved by the student. | ☐ 5.4.b |
| 5.5 Students may exit from the program: | |
| 5.5.a during any week of the year. | ☐ 5.5.a |
| 5.5.b at the end of each month or fixed interval. | ☐ 5.5.b |
| 5.5.c only at the end of a term or semester. | ☐ 5.5.c |

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|

5.6 New students start the program:

5.6.a during any week of the school year. ☐ 5.6.a

5.6.b at the beginning of each month or fixed interval. ☐ 5.6.b

5.6.c at the beginning of a term or semester. ☐ 5.6.c

5.7 The new student orientation is structured, i.e. students are individually oriented to the program-specific procedures and learning system. ☐ 5.7

5.8 The new student orientation is unstructured, i.e., students learn about the program procedures and learning system gradually, e.g., on their own, from other students. ☐ 5.8

5.9 Program completion is based on satisfactory grades during a fixed number of terms or semesters. ☐ 5.9

5.10 Students complete the program when they have achieved the task/skill requirements contained in a specified list, regardless of time of year. ☐ 5.10

5.11 The physical facilities used for <u>knowledge/theory</u> instruction:

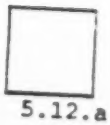
5.11.a are arranged for <u>large group</u> instruction, demonstration, presentations, etc. ☐ 5.11.a

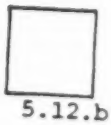
5.11.b include individual learning stations and/or study locations. ☐ 5.11.b

DESCRIPTORS

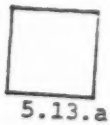
0=not at all
1=low extent
2=moderate ext
3=high extent

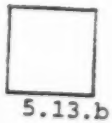
5.12 The physical facilities used for performance instruction:

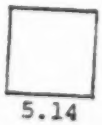
5.12.a are arranged for large group instruction, demonstration, presentations, etc.  5.12.a

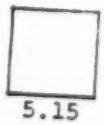
5.12.b include individual learning stations and/or study locations.  5.12.b

5.13 Supplemental instructional materials and/or equipment.

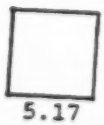
5.13.a are stored adjacent to or in close proximity to student learning stations.  5.13.a

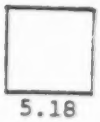
5.13.b are housed in a separate facility or school area from the classroom/lab.  5.13.b

5.14 Instructors do not receive released time nor pay for planning materials production.  5.14

5.15 Instructors are given released time or paid for the time required in planning materials production and similar curriculum activities.  5.15

5.16 Instructors use curriculum specialists in designing and producing program materials. 5.16

5.17 There is no curriculum specialist available to assist instructors with materials production.  5.17

| DESCRIPTORS | 0=not at all<br>1=low extent<br>2=moderate ext.<br>3=high extent |
|---|---|
| 5.18 Instructors use audio-visual specialists in producing learning materials. |  <br>5.18 |
| 5.19 There is no audio-visual specialist available to assist instructors with materials production. | <br>5.19 |